

How Do They Do That? EVAAS and the New Tests

October 2013

SAS® EVAAS® for K-12



**THE
POWER
TO KNOW®**



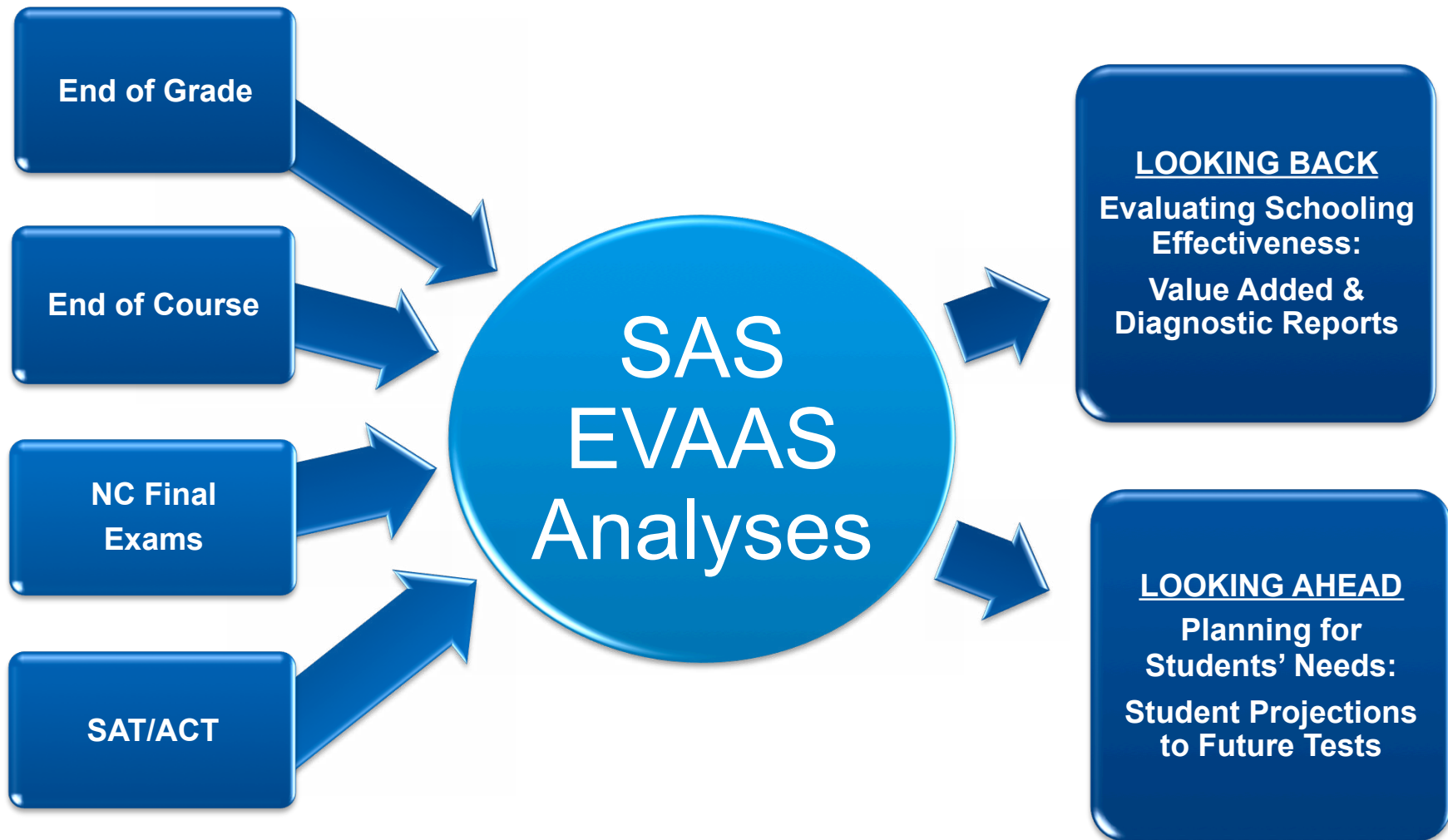
Presenter

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What is SAS EVAAS?



It's all about PROGRESS

EVAAS is the **Growth Measure** for North Carolina. It looks at school effectiveness in terms of how much academic progress students make in a district, school, or classroom.

The State Board of Education sets performance levels because North Carolina is also interested in the **attainment** level of students.

Attainment and Progress are two different things. Both are important, but EVAAS is only concerned with PROGRESS.

What do we need to know to measure Progress?

Only two things:

- Where we start
- Where we end up

Then, we measure the difference.

UNDERSTANDING THE SAS® EVAAS® PREDICTIVE MODEL (AKA “URM”)

EOG SCIENCE, EOC, CTE, NC FINAL EXAMS





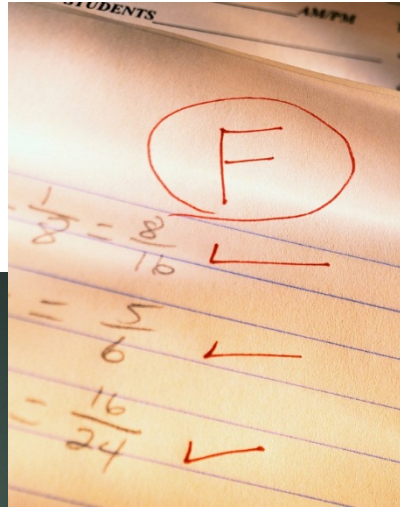
Report: District Value Added Test: End of Grade
District: District-pB Subject: Science
Year: 2012

Subject	Grade	Year	N	Mean Student Score	Mean Score %ile	Mean Pred Score	Pred Score %ile	District Effect	Effect Std Err	District vs State Avg
Science	5	2010	37	159.7	70	159.2	68	0.4	0.9	Meets Expected Growth
		2011	41	159.5	64	159.7	65	-0.2	0.8	Meets Expected Growth
		2012	42	155.1	40	159.3	60	-3.5	0.8	Does Not Meet Expected Growth
		3-Yr-Avg	120	158.0	59	159.4	65	-1.1	0.5	Does Not Meet Expected Growth
	8	2010	40	158.0	69	156.3	62	1.4	0.8	Meets Expected Growth
		2011	35	157.4	64	157.5	65	-0.1	0.8	Meets Expected Growth
		2012	36	155.4	51	156.0	54	-0.6	0.8	Meets Expected Growth
		3-Yr-Avg	111	156.9	62	156.6	60	0.3	0.4	Meets Expected Growth

Understanding Two Important Terms

Predicted Percentiles and Predicted Scores

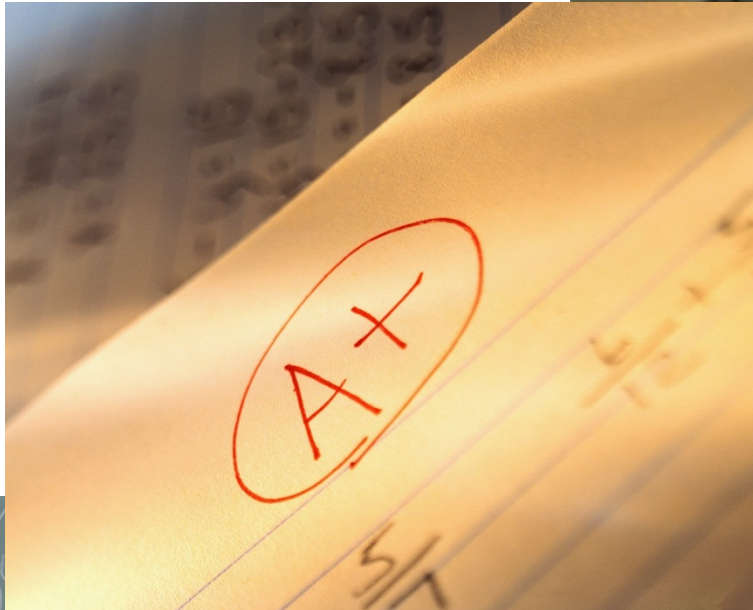
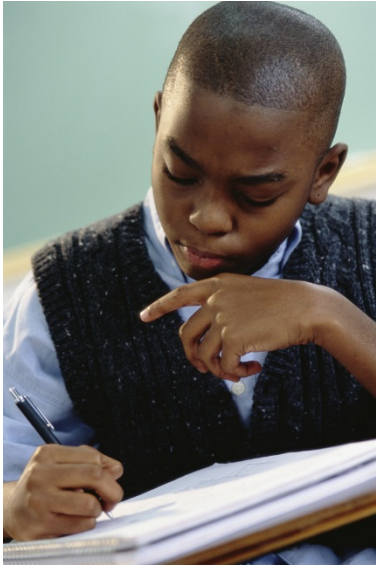
Predictions in the Classroom



During the school year, teachers, schools, and districts gather a lot of information about their students through observation, questioning, student work, and testing.

From this information, it is possible to determine where a student is, in terms of their understanding. Based on the evidence, educators might determine that the students pictured here are lower achieving than . . .

Predictions in the Classroom



... the students on this page.

However, the prediction does not determine where any of these children will score. To a large degree, that depends on what happens in the classroom.

Predicted Scores in EVAAS

EVAAS predicted scores establish a relationship between students' past testing histories and their actual scores on a test by using test histories and current scores from all students who took the test in the most recent year.



EVAAS can then determine where your students would be likely to score if they make the progress that was average for academically similar students, statewide.

Predicted Scores

Past



Current



WHAT ARE PREDICTED SCORES?

- Predicted scores are what we would expect students to score based on their own past testing histories and assuming they receive the average schooling experience in North Carolina.

Requirements for the Predictive Model

To be included in the Predictive Model

- A minimum of 3 prior test scores is required for each student

To Receive a Value Added Report

- Minimum of 10 students with a minimum of 3 prior test scores, each
- Minimum of 6 full students

Prior Test Scores and Predictions in EVAAS

Prior test scores can be in any subject.

As part of the analyses, EVAAS examines the relationships between test scores in students' past testing histories and their score on the new test to answer questions like,

- How do students' previous scores in reading/language arts subjects, math subjects, and science subjects relate to their scores on the new test?
- How does the relationship among past scores in all subjects relate to student outcomes on a new test?

Only scores from EOC and EOG courses are used as predictors, except in the case of some CTE subjects, where a prior course may be very predictive of a student's score in a subsequent CTE subject. For instance, Auto Mechanics I would be highly predictive of Auto Mechanics II.

Predicted Percentiles in EVAAS

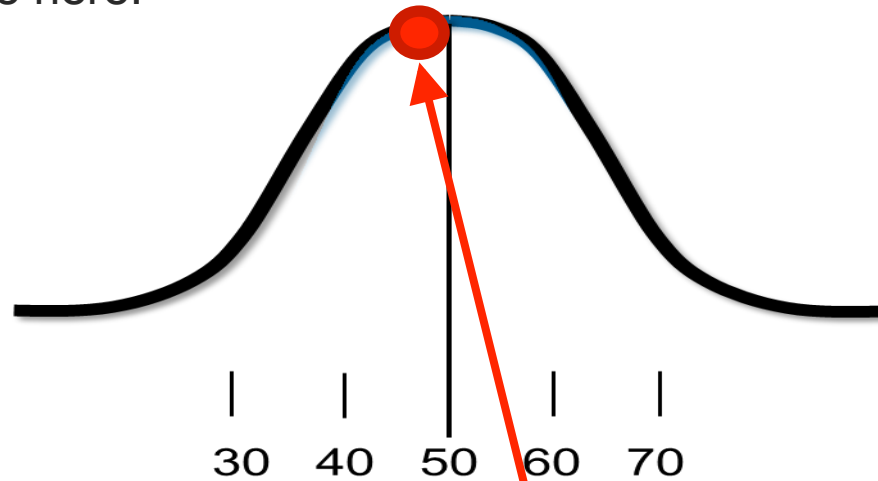
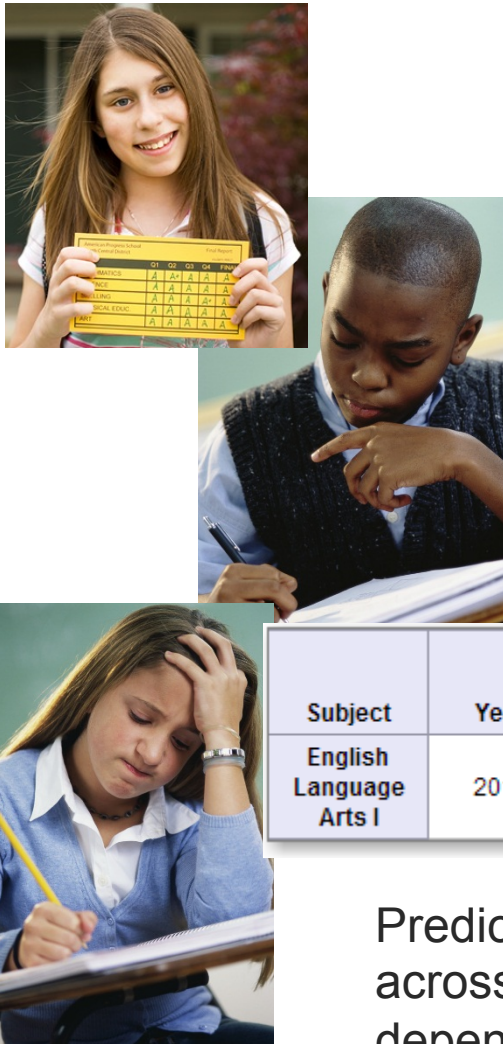
The predicted percentile is based on **the past testing history of your students**. It tells you where they were, academically, when they entered the course, compared to all students in NC who took the test in the same year. The predicted percentile answers this question:

When they entered the course, where did your students rank in the state distribution of all students who took the test? In other words,

Where did they start the course, academically?

Predicted Percentiles in EVAAS

Assume that, based on their past testing histories, your English Language Arts I students were expected to score here:



Subject	Year	N	Mean Student Score	Mean Score %-ile	Mean Pred Score	Pred Score %-ile	District Effect	Effect Std Err	District vs State Avg
English Language Arts I	2013	679	249.8	46	250.0	46	-0.2	0.3	Meets Expected Growth

Predicted percentiles for other classrooms, schools, and districts across the state could be higher, lower, or about the same, depending upon the past testing histories of their students.



Predicted Scores in EVAAS

Why do we need predicted scores if we already know the actual scores?

Why do we need a predicted score if we already know what the kids scored?

Well, we need a way to determine what score to expect of students at each predicted percentile.

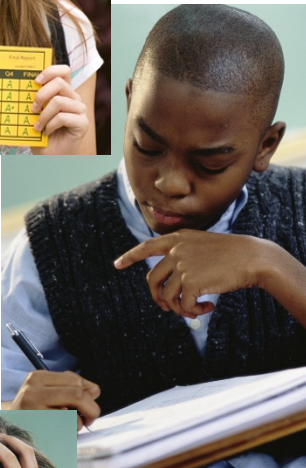
Predicted Scores in EVAAS

The **predicted score** is the score that corresponds to your predicted percentile. Taking the scores of all students, statewide, who took the test that year, we can find the score that students at each percentile scored and match your students' predicted percentile to the score associated with it.

- The predicted score tells you what your students will score in the state distribution of all students who take the test that year, **IF** they score where they are predicted to. It answers this question:

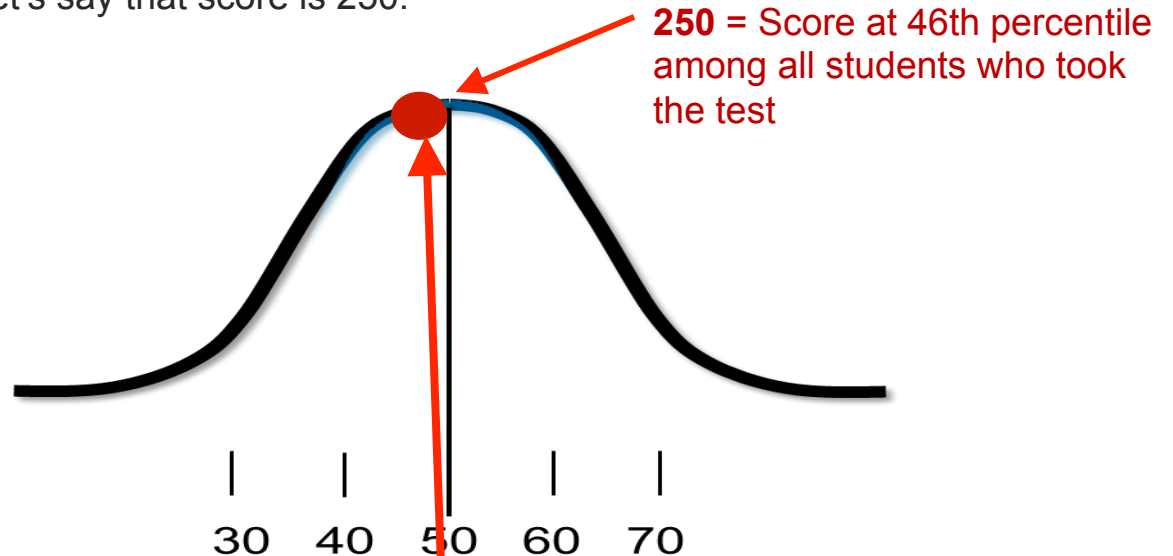
What do your students need to score to maintain their academic ranking among all students who take the test, statewide? In other words, what do they need to score to make one year's worth of growth, relative to all other students who take the course?

Predicted Scores in EVAAS



For the students in our example, the predicted score is the score that corresponds with the 46th percentile in the statewide distribution of English Language Arts I scores.

Let's say that score is 250.



Subject	Year	N	Mean Student Score	Mean Score %-ile	Mean Pred Score	Pred Score %-ile	District Effect	Effect Std Err	District vs State Avg
English Language Arts I	2013	679	249.8	46	250.0	46	-0.2	0.3	Meets Expected Growth

How Much Progress did Your Students Make?

Your EVAAS growth measure is a function of the difference between what your students are predicted to score and what they actually scored, when tested.

Subject	Year	N	Mean Student Score	Mean Score %-ile	Mean Pred Score	Pred Score %-ile	District Effect	Effect Std Err	District vs State Avg
English Language Arts I	2013	679	249.8	46	250.0	46	-0.2	0.3	Meets Expected Growth

Conceptually and simplistically,

The Mean Student Score 249.8

Minus the Mean Predicted Score 250.0

School, District, Teacher Effect **-0.2**

You will notice in your own reporting that the effect, although similar to the difference between the predicted and average scores, is not always the same. This is due to rounding and to the fact that further safeguards are employed to provide the best estimate of your effect on the progress of your students.

EVAAS Value Added Growth Measures

How much progress did your students make?

Effect is near 0.0 = Average Progress

- Students maintained their entering level of achievement
- If your effect is less than 2 standard errors above 0.0 and no more than 2 standard errors below it, you **Met Expected Growth**

Positive Effect = Number of points your students scored **ABOVE** their Predicted Score

- More than average progress
- Students left the course at a higher level of attainment
- If your effect is 2 standard errors or more above 0.0, you **Exceed Expected Growth**

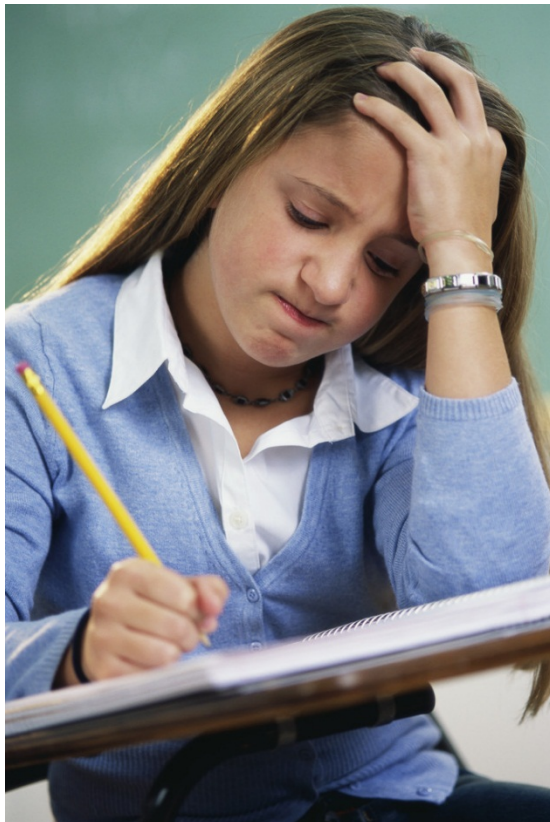
Negative Effect = Number of points your students scored **BELOW** their Predicted Score

- Less than average progress
- Students left the course at a lower level of attainment
- If your effect is more than 2 standard errors below 0.0, you **Did Not Meet Expected Growth**

Real World Impact of Effects near 0.0

In average schools, districts, and classrooms, students actually score close to what their past performance would indicate...

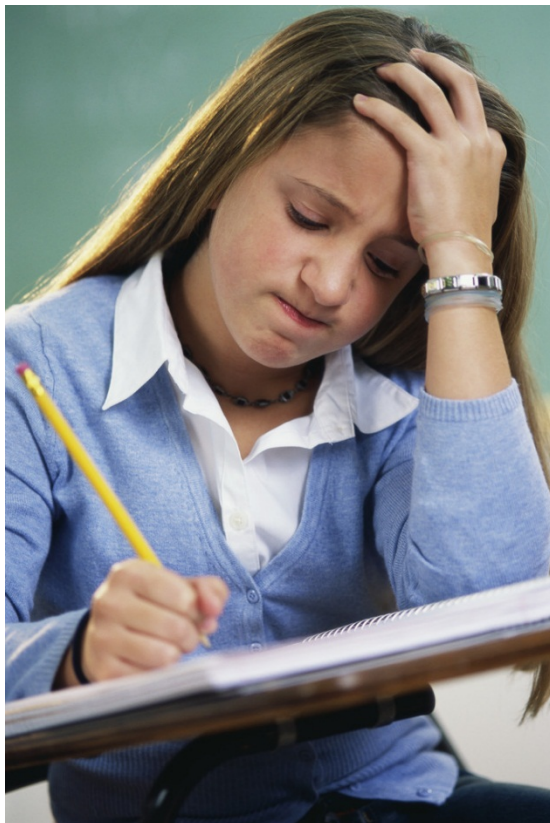
WHETHER THEY WERE INITIALLY HIGH ACHIEVING, LOW ACHIEVING OR SOMEWHERE IN BETWEEN!



Real World Impact of Positive Effects

In very effective schools, districts, and classrooms, students actually score HIGHER than their past performance would indicate...

WHETHER THEY WERE INITIALLY HIGH ACHIEVING, LOW ACHIEVING OR SOMEWHERE IN BETWEEN!



American Progress School North Central District		Final Report				
		Student Report				
		Q1	Q2	Q3	Q4	FINAL
MATHEMATICS		A	A+	A	A	A
SCIENCE		A	A	A	A	A
SKILLING		A	A	A	A+	A
SICAL EDUC.		A	A	A	A	A
ART		A	A	A	A	A

Real World Impact of Negative Effects

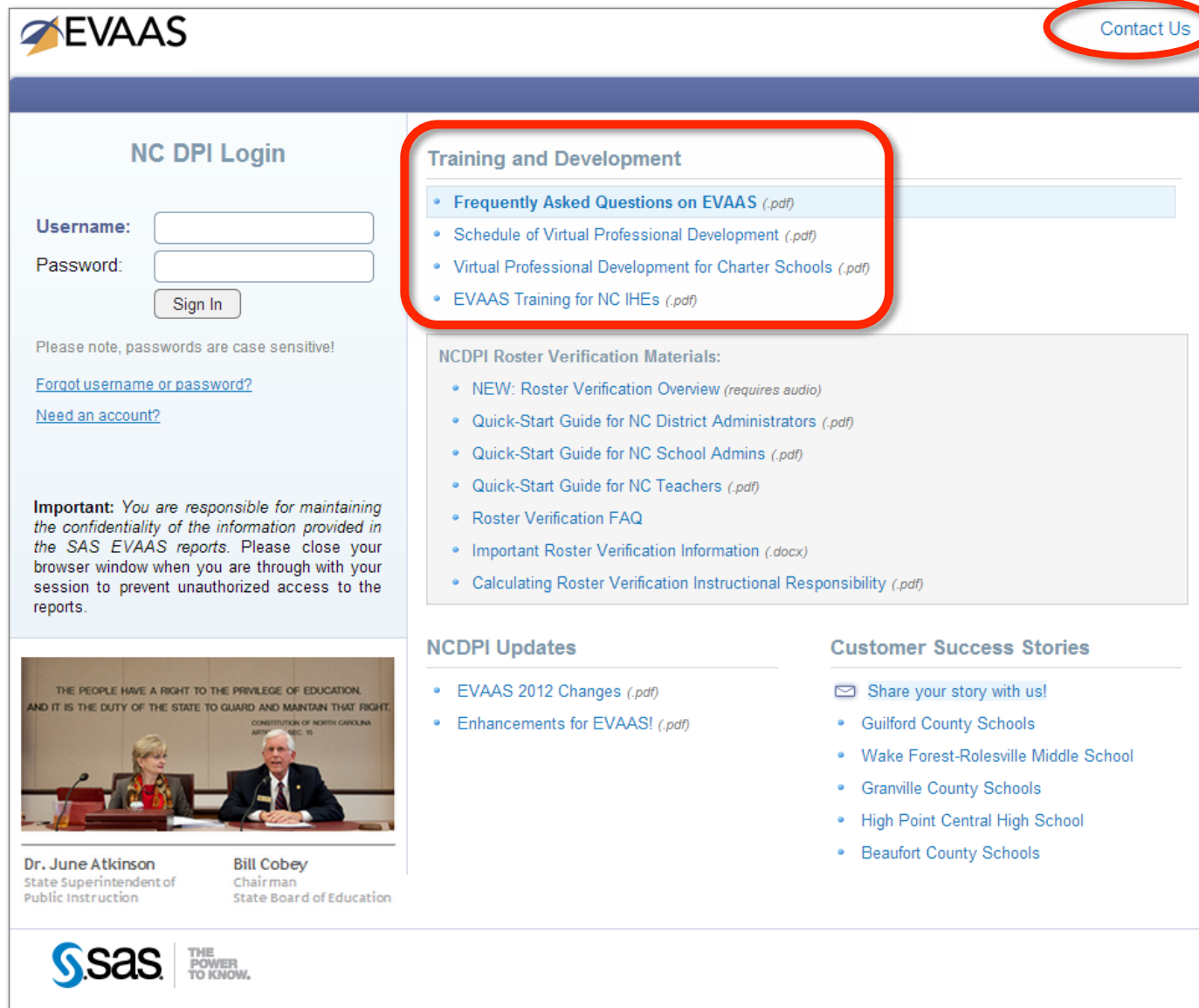
In very ineffective schools, districts, and classrooms, students actually score LOWER than their past performance would indicate...

WHETHER THEY WERE INITIALLY HIGH ACHIEVING, LOW ACHIEVING OR SOMEWHERE IN BETWEEN!



SAS EVAAS Questions?

<http://ncdpi.sas.com>



EVAAS [Contact Us](#)

NC DPI Login

Username:

Password:

Please note, passwords are case sensitive!

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Important: You are responsible for maintaining the confidentiality of the information provided in the SAS EVAAS reports. Please close your browser window when you are through with your session to prevent unauthorized access to the reports.

Training and Development

- [Frequently Asked Questions on EVAAS \(.pdf\)](#)
- [Schedule of Virtual Professional Development \(.pdf\)](#)
- [Virtual Professional Development for Charter Schools \(.pdf\)](#)
- [EVAAS Training for NC IHEs \(.pdf\)](#)


NCDPI Roster Verification Materials:

- [NEW: Roster Verification Overview \(requires audio\)](#)
- [Quick-Start Guide for NC District Administrators \(.pdf\)](#)
- [Quick-Start Guide for NC School Admins \(.pdf\)](#)
- [Quick-Start Guide for NC Teachers \(.pdf\)](#)
- [Roster Verification FAQ](#)
- [Important Roster Verification Information \(.docx\)](#)
- [Calculating Roster Verification Instructional Responsibility \(.pdf\)](#)


NCDPI Updates

- [EVAAS 2012 Changes \(.pdf\)](#)
- [Enhancements for EVAAS! \(.pdf\)](#)

Customer Success Stories

 [Share your story with us!](#)


- [Guilford County Schools](#)
- [Wake Forest-Rolesville Middle School](#)
- [Granville County Schools](#)
- [High Point Central High School](#)
- [Beaufort County Schools](#)



THE PEOPLE HAVE A RIGHT TO THE PRIVILEGE OF EDUCATION,
AND IT IS THE DUTY OF THE STATE TO GUARD AND MAINTAIN THAT RIGHT.
CONSTITUTION OF NORTH CAROLINA
ARTICLE V, SECTION 15

Dr. June Atkinson
State Superintendent of
Public Instruction

Bill Cobey
Chairman
State Board of Education

 **THE POWER TO KNOW.**